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DEPARTMENT OF STATE LANDS

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January 10, 1977

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American Colloid Company (ACCo) of Skokie, Illinois has applied to the Department for an Open Cut Mine Contract on Sections 1 and 2, Township 9 South, Range 58 East, MPM. The proposed Contract is for a bentonite mine near the town of Alzada in Carter County, Montana. The Department issued a draft Environmental Impact Statement (EIS) on ACCo's proposal on November 18, 1976.

Letters of response to the draft EIS, were received from the following:

Leo Berry, Jr.
~~XXXXXXXXXX~~
COMMISSIONER

Montana Bureau of Mines and Geology
Montana Department of Community Affairs
Montana Department of Fish and Game
U.S. Department of Agriculture, Soil Conservation Service
U.S. Department of Interior, Bureau of Land Management
Yellowstone-Tongue Areawide Planning Organization
Olson-Elliott and Associates, Scientific Consultants.

Pursuant to section 26-2.2(18)-P290(2)(a) of the Department's rules implementing the Montana Environmental Policy Act, the Department has determined that the draft EIS satisfies the requirement for a final EIS. Accordingly the Department is sending a copy of all comments received in response to the draft statement and Department's responses to such comments to the Governor, Environmental Quality Council, ACCo and to others who received copies of the draft EIS.

The Department intends to issue an Open Cut Mine Contract for ACCo's proposed mine not less than 15 days from the date of this letter.

Sincerely,

Dennis Hemmer s/B.H.
Dennis Hemmer
Research Specialist

Attachment

DH/11w

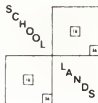
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PUBLIC COMMENTS
on
DRAFT ENVIRONMENTAL IMPACT STATEMENT
PROPOSED OPEN CUT MINING CONTRACT
for
AMERICAN COLLOID COMPANY

Montana Department of State Lands
Helena, Montana
January 10, 1977

Submitted pursuant to
Montana Environmental Policy Act
Section 69-6504(b)(3)



MONTANA BUREAU OF MINES AND GEOLOGY
MONTANA COLLEGE OF MINERAL SCIENCE AND TECHNOLOGY
BUTTE, MONTANA 59701
(406) 792-8321

December 2, 1976

Environmental Coordinator
Department of State Lands
Capitol Station
Helena, Montana 59601

Gentlemen:

I have read the draft Environmental Statement for a proposed bentonite mine near Alzada. This mine is proposed by American Colloid Company.

It seems to me that this statement thoroughly and objectively covers the probable effects of mining bentonite at this locality. I think that any adverse effects that may result from mining are outweighed by the industrial need for this high-quality bentonite.

Sincerely yours,

Richard B. Berg
Richard B. Berg
Economic Geologist

RBB:ech



MONTANA DEPARTMENT OF COMMUNITY AFFAIRS

Thomas L. Judge
Governor

Capitol Station, Helena, Montana 59601
Eastern Montana Field Office
Hagenston Building
Glendive, MT 59330
Phone: 365-4462

December 21, 1976

Mr. Joe Murphy (and/or Environmental Coordinator)
Department of State Lands
Capitol Station
Helena, MT 59601

Dear Mr. Murphy:

Please note that the EIS reached me somewhat late (on December 15th). Thus, I'm replying and commenting as briefly as possible and only on what I see as major points.

Overall, I see the EIS as well done, competent and with a good depth of research.

I talked to Brace Hayden on December 21st and he mentioned that comments could still be accepted; hope they will be helpful in preparing the final EIS.

Sincerely,

Alden Kimsey
Energy Researcher

as

<u>Page</u>	<u>Paragraph</u>	<u>Question/Comment</u>	
5	3	Is it known that this 20,000 acres to be disturbed in future is located in <u>same general area</u> as described in EIS? I believe it would help to state generally where this future mining may take place.	A
9	3	Could we be <u>more specific</u> as to potential location of "large coal fired generating plants"? Are we referring here to plants that may be built much farther north (i.e., McCone County, etc.)?	B
15	3	I would like to see a more detailed discussion and a specific description of methods concerning creation of stock water ponds. I assume these are the same ones (mentioned: page 30; paragraph 4) that have cattails planted on perimeter, etc.	C
15	4	It seems to me that additional on-the-ground exploration and research should be accomplished to determine whether or not ground water supplies do exist under the bentonite beds. This could possibly prevent destroying "good" water and could prevent "bad" water from being brought to the surface, etc.	
20	6	Are "two schools" correct? During recent research efforts I was told that there were <u>four</u> schools in just the 30-mile area (along Boxelder Creek) between Hammond and a point SE of Ekalaka.	D
22	3	I'm not absolutely clear on the first sentence. It's probably just a matter of sorting it out, etc.	E
		<u>What</u> are we suggesting as a "desirable approach"? Is it salvage of surface soil? (This is <u>always</u> desirable). I suspect we refer here to the more specific idea of salvage of <u>both</u> surface soil and subsoil. Which one is the "buffer"? Do we consider both surface soil <u>and</u> subsoil as buffers?	

<u>Page</u>	<u>Paragraph</u>	<u>Question/Comment</u>	
22	3 (Cont.)	Additionally, the sentence "This... revegetation" seems to come in abruptly and I'm not sure about <u>what</u> offers "a source of native plant seed." Are we speaking of dormant seed in the original surface soil? This, perhaps, needs clarification.	
23	2	Concerning revegetation--will the company be required to irrigate and add nutrients to the mined areas? For how long? <u>Only two growing seasons</u> ; or will they be required to stay with the revegetation process until a stabilized plant cover has been obtained?	F
27	2	Hauling will be done on private haul roads closed to the public, but where will the terminal (i.e., unloading point) be for this hauling? I don't recall any mention of where the haul trucks will unload. I believe it is essential information.	G
30	4	Concerning seeded areas: same questions as listed for page 23; paragraph 2. Concerning retention sites: are these sites the same as stock ponds mentioned on page 15, paragraph 3? If so, why not use just one terminology; calling them by different names leads to the idea that they are meant to serve different purposes. If these two water sites are truly different, then I believe we need more discussion concerning how they are created and whether they are a sort of <u>accidental</u> by-product of mining to be created at whim of earth-moving personnel or whether they are being <u>planned</u> by environmental water sites that otherwise would be wasted.	H

<u>Page</u>	<u>Paragraph</u>	<u>Question/Comment</u>
30	5	In the final EIS, I would definitely like to see a full discussion of what lurks behind the phrases "limited success" and "severe problems."
31	2	Are steps being taken to regulate mining operations so that bentonite is not "mixed with topsoil"?

I

J

DSL RESPONSE TO THE LETTER

FROM

MONTANA DEPARTMENT OF COMMUNITY AFFAIRS

- A. The 20,000 acres is located in the same general area i.e. southern Carter County.
- B. Specifically the coal fired generating plants referred to were Colstrip numbers 1, 2, 3, and 4. There may be others at a later date, but there are no specific locations presently known.
- C. The probability of encountering ground water under a bed of bentonite in the permit area is relatively small. If water is encountered it would probably be confined to areas along zones of fracture in the underlying beds of shale. If such a zone were to produce large quantities of water under a significant head, one would expect that water would have migrated horizontally and appear as a seep or spring along areas of outcrop. However as such conditions do not exist in the permit area, any water encountered will probably not be in significant quantities.

American Colloid's proposed reclamation plan, (section (ii)), treats water impoundments as follows:

"... Where conditions are suitable and there is a need, some areas will be reclaimed as livestock and wildlife watering sites, waterfowl habitat, fish ponds, sedimentation or erosion control structures or other beneficial use if it is deemed necessary or desirable. The designated use of each individual site shall be approved by the Department. A diagram, including cross sections, of the structural design of all water impoundments will be submitted to the department for approval prior to their construction. The construction of any water impoundment will not adversely affect other landowners rights or create a hazard which could cause off site damage from washout or overflow to downstream property."

DSL will use the United State Department of Interior - Bureau of Reclamation's "Design of Small Dams" as its basic guide for determining the suitability of each impoundment structure.

Ponds designed primarily for wildlife use will incorporate the recommendations of the Montana Department of Fish and Game.

In no case will impoundments of "accidental" origin be allowed.

- D. DSL was in error here. There are 19 schools in Carter County - 18 elementary and one high school (personal communication with Bob Stockton, Office of the Superintendent of Public Instruction).
- E. The "desirable approach" is to salvage the surface soil, subsurface soil, and overburden separately. The buffering referred to is simply the concept of separating desirable from undesirable materials.
The "source of native seed" is seed in the surface soil.
- F. No irrigation or nutrient addition will be required. Two growing seasons is the minimum period required before the applicant can apply for bond release. Bond will not be released until a stable, suitable vegetative cover has been established.
- G. Haul wagons will unload at ACCo's plant in Belle Fourche, South Dakota.
- H. Water retention sites and stockponds may or may not be the same.
(see response C above).
- I. By "limited success" it was meant that a few reclaimed areas have been successful (the bond has been released); others have not at this time been

successful. "Severe problems" refers primarily to the problems encountered in trying to revegetate problem soils, and also the problem of grazing pressure on reseeded areas.

- J. Topsoil is salvaged separate of other materials and by law 2 feet of material suitable for plant growth is required over non-suitable material (bentonite). The law is enforced by periodic inspections.

STATE OF MONTANA



DEPARTMENT OF

FISH AND GAME

Miles City, Montana 59301

November 23, 1976

Mr. Dennis Hemmer
Research Specialist
Department of State Lands
Helena, Montana 59601

Dear Dennis:

The EIS for the proposed benonite mining operation near Alzada was well done. Needless to say, there has been considerable progress up the evolutionary ladder in both reclamation laws and reclamation practices since bentonite mining operations began in the Alzada Area in 1948. Despite the progress that has been made, it should be emphasized that reclamation success in the Alzada area will be extremely difficult due to the existing edaphic and climatic conditions.

I just have a few comments to make on the EIS.

a) In some of my past inspection tours of Baroid's Mining operations, I noticed the presence of numerous uranium identification markers in the area where bentonite mining operations were occurring. If future uranium mining does become a reality in the near future, such operations could become a potential threat to any land that has become reclaimed. **A**

b) Preparation of the seedbed should follow natural contours. Some of the seedbeds prepared in the past have been at right angles to the natural contours resulting in some severely eroded areas. **B**

c) Some of the water-retention pits that I examined in the past were extremely turbid due to the colloidal suspension of bentonite particulates. I noted that riparian aquatic vegetation was essentially lacking; therefore, one could expect some difficulty in attempting to revegetate water retention sites with cattails as suggested in the EIS. **C**

d) I noted that no mention was given to peripheral wildlife adjacent to the proposed mining operation in reference to disturbance factors created by the bentonite mining operation. The cumulative effects of the mining operation on peripheral populations, as documented in other strip-mining operations, does have an impact. Although such impacts will certainly be minimal in this particular operation, they certainly will occur and mention of that fact should be made. **D**

e) I would strongly concur with the statement that "Ultimately fencing of newly seeded areas may be required if successful reclamation is to occur." Since this area represents a very fragile ecosystem, it is imperative that these areas be protected to insure successful revegetation.

E

Sincerely,



Kenneth C. Walcheck
Information Officer

KCW:dm

cc: Jim Posewitz

DSL Response to the Letter

From

Montana Department of Fish and Game

- A. Departmental action has been taken to coordinate uranium exploration and bentonite pit reclamation so as to minimize the possibility of surface disturbance at two different times. Uranium exploration areas must be reclaimed in accordance with the Montana Strip and Underground Mine Reclamation Act. Solution mining of uranium is presently under moratorium.
- B. The Montana Open Cut Mining Act requires that all drill seeding occur along the contour. This was an omission in the draft EIS; all drill seeding in the Alzada permit area would occur along natural contours.
- C. In the past pit floors have been left bare with remanent bentonite in contact with impounded water resulting in turbid ponds. Presently the pit floors are being covered. Hopefully this will allow plant growth and decrease turbidity.
- D. Perhaps greater emphasis should have been made in the draft EIS with regards to impacts on wildlife adjacent to the proposed mining area. On page 25 it was stated that wildlife would be impacted by the "disruptions caused by increased human activity in the area." Also, on page 26 it was stated that wildlife populations could also be impacted by the building of haul roads and by the greater hunting pressure that could be expected in the area. Other impacts to "peripheral wildlife" might include:

- 1) interference with migration patterns and with local habitat use of such free-ranging species as antelope.

- 2) noise, resulting in a decrease in off-site habitat utilization by some species.
- 3) increased vehicle travel resulting in possible increases in poaching and wildlife - vehicle collisions. Even though mining haul roads are closed to the public, one could still expect an increase in poaching.

E. The Department concurs - no response required.

UNITED STATES DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

P. O. Box 970, Bozeman, Montana 59715

November 30, 1976

Environmental Coordinator
Department of State Lands
Capitol Station
Helena, MT 59601

Dear Mr. Hemmer:

We acknowledge receipt of the draft environmental statement for a proposed bentonite mine by the American Colloid Company in Carter County, Montana, that was addressed to the Soil Conservation Service on November 18, 1976 for review and comment.

We have reviewed the above draft environmental statement and find that there are no controversial items in the statement within the realm of the Soil Conservation Service's expertise and responsibilities. We find no conflict with any SCS on-going or planned programs or projects. It appears that American Colloid Company has developed a very workable plan for reclamation of the mined area.

We appreciate the opportunity to review and comment on this proposed project.

Sincerely,

Van K Haderlie
Van K Haderlie
State Conservationist





United States Department of the Interior
BUREAU OF LAND MANAGEMENT
222 North 32nd Street
P.O. Box 30157
Billings, Montana 59107

1793 (962)

DLC 20 1976

Mr. Brace Hayden
Environmental Coordinator
Montana Department of State Lands
1625 Eleventh Avenue
Helena, Montana 59601

Dear Mr. Hayden:

We have reviewed the draft EIS prepared by your department on the proposed mining contract for American Colloid for bentonite in the area of Alzada, Montana, and we have the following comments.

In reviewing the document, we noticed that no mention was made concerning surface and subsurface ownership within the two-section permit area or in the surrounding area. We feel this is certainly basic to any environmental statement.

The BLM administers the majority of the surface in these two sections as shown on the enclosed Recreation Access Map. Patent applications are pending as shown on the enclosed partial copy of the MT Plat for this township. The BLM also administers the entire mineral estate on these two sections. We feel that these facts should be addressed under the Legal Concerns portion of this impact statement.

A

In Section IX, the discussion is limited to range as being the only long term use of the land. Certainly watershed, wildlife habitat, and recreation would also be long term uses. We feel this section should be expanded to include these uses.

B

The transmittal letter dated November 18, 1976, indicates that the bentonite in Sections 1 and 2 would be mined in small three to ten acre pits. Figure 4 of the report is a map which indicates a fairly continuous cut and fill stripping pattern. The mining plan on page 6 mentions the continuous stripping and also talks of numerous pits. We would appreciate knowing more about the method and area of mining when this information is known. Will there be strips or pits?

C



We appreciate the opportunity to go over these plans, to be alerted of new mining on public lands, and to see how the proposed mining will affect our other resource management.

Sincerely yours,

A handwritten signature in cursive script that reads "Kannon Richards".

Kannon Richards
Acting State Director

Enclosures

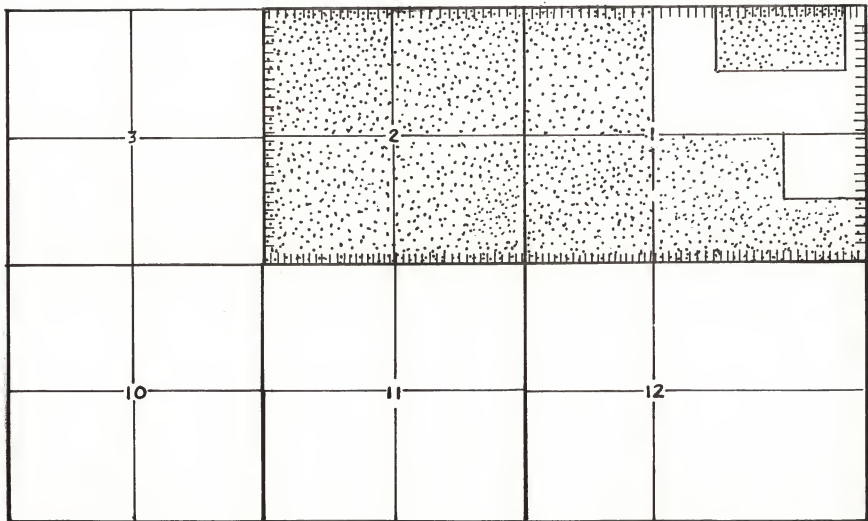


Area of EIS Study



BLM Surface

All subsurface within the area is Federal



DSL Response To The Letter

From

Bureau of Land Management

- A. The Department erred in not describing the surface and subsurface ownership in the proposed mining area. We wish to thank the BLM for providing such information.
- B. Watershed, wildlife habitat and recreation are certainly other long-term uses of the post-mined surface. A more complete discussion of such uses are as follows:

Assuming that viable water retention sites are left (one per quarter section)

- a) A more even disbursement of range cattle could be achieved. This would encourage more uniform grazing throughout the area. With addition cross-fencing, a rest/rotation system of grazing could be established without loss of water access. Experience in other areas has shown that areas adjacent to ponds have been severely over-grazed, while areas a mile or two away are hardly grazed at all.
- b) Additional waterfowl habitat could be established. ACCo's proposed mining area is quite isolated and would thus be conducive to breeding brood rearing, resting, loafing, etc.
- c) There are ponds (old bentonite pits) in the Colony, Wyoming area that support fish populations (species, density, etc. are unknown; DSL does know of one pond that supports trout). The main problem here is establishing aquatic vegetation on the pit floors and maintaining adequate water levels.

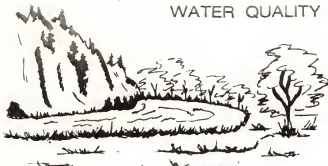
- d) Ponds would also provide a selection of watering sites for all forms of wildlife.
- e) Undoubtedly the area receives some recreational use, however, DSL feels such use would probably be limited to an occasional hunter. The general area is very sparsely populated and is a considerable distance from a city of 1,000 or more residents.
- f) IF reclamation is successful and if the area is properly managed long-term productivity in terms of wildlife habitat could be enhanced as vegetation diversity and areas of edge would both be increased.

C. ACCo presently anticipates disturbing 20 acres during the first years of operation in a continuous cut and fill manner. Page 6 of the draft EIS outlines the removal and replacement sequence of topsoil, subsoil and overburden, for the operation. Each successive cut in the sequence is referred to as a new pit. Each of these new pits are generally 3 to 10 acres in size. Appendix A (p. 38) illustrates this procedure and shows the successive cuts as Pit #1, #2, etc.

Changes in the grade of bentonite, depth of overburden, thickness of the bed, or market conditions may however result in modification to ACCo's plan. Any modifications or amendments to the mining plan must be approved by the Department of State Lands. Copies of proposed amendments will be sent to the appropriate landowner or land managing agency for comment.

Under the terms of ACCo's proposed reclamation contract, mining plans for the second year of operation will be submitted for Departmental approval 10 days prior to the anniversary date of the contract.

WATER QUALITY MANAGEMENT PROJECT



YELLOWSTONE-TONGUE A.P.O.

P. O. Box 503
Broadus, Montana 59317
406-436-2802 or 406-436-2816

CLARK JUDY, Director

DOREL A. HUNT, Planner

AMBREY GARTNER, EIT

December 6, 1976

Environmental Coordinator
Dept. of State Lands
Capitol Station
Helena, MT 59601

Dear Sir or Madam:

Enclosed are the comments of the Yellowstone-Tongue APD concerning the draft EIS for a proposed bentonite mine near the town of Alzada, Carter County, Montana, to be operated by American Colloid Company.

The possible combination of high concentrations of nickel and water soluble Boron, the interception of flowing aquifer, and ponded water in the study site could impact animal communities.

A

An interception of a flowing aquifer could necessitate a discharge permit. Also this could impact neighboring wells, in which event arrangements should be made for providing those well owners with an equally adequate water supply.

B

Areas of paleontological, as well as archeological interests exist in the area around Ekalaka. Little information is provided in the EIS to substantiate the claim that the area was used by aboriginal man only for hunting.

C

The following two statements should be clarified:

VII. A.1. Topography, on p. 29, is the statement "ACCo has agreed to try to limit ponds to one per quarter section."

D

VII. A.4. Hydrology, on p. 30 is the statement "Creation of ponds would be limited to no more than one per section."

Sincerely,

Ambrey Gartner

AG/dt

DSL Response To The Letter

From

Yellowstone-Tongue A.P.O.

- A. The Department knows of only one area where an aquifer was encountered in mining bentonite and is aware of no such problems in this instance.

The U.S. Forest Service Lab in Rapid City is conducting studies on water quality in bentonite ponds. When the results from this study are available this question can possibly be better answered.

- B. Any interception of an artesian aquifer would probably have little, if any, significant effect on wells which tap the same aquifer. Potential aquifers below bentonite beds in the permit area are comprised of shales and as a result are not very permeable. If water occurs, it would be found along zones of fracture in the underlying shale beds. No wells are known to tap this potential aquifer either within the permit area, or in the surrounding area. If distant wells tap the aquifer, it is doubtful that the piezometric surface would be altered.

If mining operations interrupted a aquifer and produced a flowing spring a discharge permit might be necessary. ACCo would have to apply to the Water Quality Bureau of the Montana Department of Health and Environmental Sciences for such a permit.

Should a turbid discharge leave ACCo's property or lease area or leave any other body of water as defined by the Water Quality Bureau a discharge permit would be required. Such a situation might occur if water produced could not be routed around the mining operations. Should such a discharge be permanent, a

permit would no longer be required once mining operations have ceased and the water leaving the site meets the Water Quality Bureau's standards. (see also DSL's response C to the letter from the Yellowstone-Tongue A.P.O.).

- C. Information in the draft EIS was taken from an archaeological survey of the area performed by the University of Montana statewide Archeological Survey. This survey was titled "An Archeological Examination of American Colliod Company Mining Claims in Carter County, Montana" and was written by Dale Rominger. Copies of this report are on file with the Department and available for public review in the Helena office.
- D. The statement on page 30 is an error; it should read "Creation of ponds would be limited to no more than one per quarter section."

OLSON-ELLIOTT & ASSOCIATES

SCIENTIFIC CONSULTANTS

P. O. Box 1209
349 Last Chance Gulch
Helena, Montana 59601
Phone: (406) 443-5560

December 1, 1976

Environmental Coordinator
Department of State Lands
Capitol Station
Helena, Montana 59601

Gentlemen:

The following are comments on the draft EIS for a proposed bentonite mine near the town of Alzada, proposed by the American Colloid Company.

It appears that most of the critical areas have been adequately covered by the draft EIS. However, of most concern is the adequacy of the vegetation data presently available for the area (pg. 16 of draft statement).

It is not clear how the Department of State Lands is going to determine if adequate reclamation has occurred for returning the bond if the initial vegetation data are inadequate. The current vegetation guidelines require that reclaimed use to livestock and/or wildlife be based on the AUM capacity and the canopy coverage of plant species on the lands to be disturbed. It is obvious that without sufficient vegetative data before disturbance, it will be impossible to determine whether the land has been adequately reclaimed.

I suggest that a detailed reclamation goal be established for disturbed land, based on data of current vegetation. This will provide both the American Colloid Company and the Department of State Lands with specific criteria for return of the bond at a future date. This should include species, canopy coverage, method of measuring vegetation, and sustained AUM capacity.

The above comments are based on the vegetative data discussion included in the EIS. If adequate data are available for reclamation determination, the source and extent of the data should be included in the final EIS.

Thank you for allowing us the opportunity to comment on the proposed action.

Sincerely,

Dana C. Schmidt,

President

DSL Response To The Letter

From

Olson-Elliott and Associates

As mentioned in the draft EIS the vegetative work on this area was done prior to completion of the current vegetation guidelines. The information furnished would not allow bond release determination under the current guidelines.

In formulating the present bentonite guidelines the Department settled on two criteria for bond release for livestock grazing use. First, that the land have a canopy coverage equal to that present prior to mining. This was aimed primarily at preventing erosion. Second, the Department requires that the range be capable of sustaining the same number of A.U.M.'s as that range type in good (75%) condition. In writing our guidelines, we used S.C.S. range type and condition because many potential mining sites have been badly overgrazed and this was the only system that, in our opinion, would allow a post mining productivity measurement free of bias from previous use or abuse.

1950-1951

The first year of the project was spent in the field collecting data on the distribution and abundance of the various species of fish in the lake. This was done by means of a series of trawls and seines, which were set out at various points in the lake and hauled at regular intervals. The results of these collections were then analyzed and compared with the data from previous years. It was found that the distribution of the various species of fish was very different from that of previous years, and that the abundance of many of the species had increased. This was due to a number of factors, including the construction of the dam and the resulting changes in the water level and the flow of the river. The project was continued for a number of years, and the results of the various collections were analyzed and compared with the data from previous years. It was found that the distribution of the various species of fish was very different from that of previous years, and that the abundance of many of the species had increased. This was due to a number of factors, including the construction of the dam and the resulting changes in the water level and the flow of the river.